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TI - Film form refreshing food with flavour - contg. two or more polysaccharide(s), thickening and stabilising agent, plasticiser, fragrance, sweetening, etc.

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PA - (TAZA/) TAZAWA T

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NC - 1

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AB - (JP05236885-A)

The food comprises of two or more polysaccharides having film forming property, thickening and stabilising agent, plasticiser, emulsified fragrance material, sweetening, acidic taste matter and essence.

USE - Mouth deodorising and refreshing feeling are easily conducted by dissolving the food in the mouth. (Dwg.0/0)

## **Bibliographic Information**

**Membrane food preparation for use as mouth deodorant.** Makino, Akimitsu. (Tazawa Toshihiko, Japan). Jpn. Kokai Tokkyo Koho, 3 pp. CODEN: JKXXAF. JP 05236885 A2 930917 Heisei. Patent written in Japanese. Application: JP 91-269943 910717. CAN 120:53431

## **Abstract**

The membrane food is prepd. from membrane-forming polysaccharides such as carrageenan, stabilizers such as xanthan gum, plasticization agents such as sorbitol, emulsified essence, sweetener, acid, and ext. The membrane food is easy to carry, and it melt easily in mouth.

**Patent Classifications:** Main IPC: A23L001-00.

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Trimeresurus flavoviridis

(ext., in prepn. of membrane food for mouth deodorant)

Polysaccharides, biological studies

(membrane-forming, in prepn. of membrane food for mouth deodorant)

Deodorants, (mouth, prepn. of membrane food as)

Essential oils

(mint, Mentha, emulsified, in prepn. of membrane food for mouth deodorant)

50-70-4, Sorbitol, biological studies

77-92-9, biological studies

9000-07-1, Carrageenan

9000-40-2, Locust bean gum

9057-02-7, Pullulan

11138-66-2, Xanthan gum

22839-47-0, Aspartame

(in prepn. of membrane food for mouth deodorant)

Registry Number: 9057-02-7

## **Supplementary Terms**

mouth deodorant membrane food.

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TI Film form refreshing food with flavour - contg. two or more  
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(71) 【出願人】

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【氏名又は名称】 田沢 利彦

【住所又は居所】 東京都杉並区本天沼 2 丁目 2 6 - 1 9 本天沼コーポ

(72) 【発明者】

【氏名】 牧野 昭光

【住所又は居所】 大阪府大阪市中央区南久宝寺町 4 丁目 5 番 1 5 - 3 0 2 号有限会社フォーエム内

(74) 【代理人】

【弁理士】

(57) 【要約】

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(71) [Applicant]

[Applicant Code] 592131249

[Name] TAZAWA TOSHIHIKO

[Address] Tokyo Suginami-ku Hon Amanuma 2-Chome 26-19 Hon Amanuma Coop

(72) [Inventor]

[Name] Makino Akimitsu

[Address] Inside of Osaka Prefecture Osaka City Chuo-ku Minami Kyuhoji-machi 4-Chome 5-1 5-302 number Four M.P.C.

(74) [Attorney(s) Representing All Applicants]

[Patent Attorney]

(57) [Abstract]

【目的】 口中で唾液により溶解し、成分が口中に拡がり、芳香と清涼感とを味わうことができ、かつ軽量で手の平に収まるサイズで、持ち運びに便利であり、人目に触れることなく口臭予防や気分転換を図る。

【構成】 膜形成能をもつ複数の多糖類、増粘安定剤、可塑性剤、乳化された香料、甘味料、酸味料およびエキス類から成るフィルムを手の平に収まる大きさにカットする。

【特許請求の範囲】

【請求項】 膜形成能を有する複数の多糖類、増粘安定剤、可塑性剤、乳化された香料、甘味料、酸味料およびエキス類の成分からなるフィルム化した芳香清涼食品。

【発明の詳細な説明】

【0001】

【産業上の利用分野】 本発明は口臭予防と気分転換を主目的とした、携帯に便利で、かつ公の場所等で人目に触れずに食することのできるフィルム化した芳香清涼食品に関するものである。

【0002】

【従来の技術】 従来口臭予防や気分転換を目的とした食品には、チューインガム、飴、清涼飲料等があるが、口臭予防や気分転換の速効性を持ち、かつ公の場所等の人前で口を動かさず（そしゃくせず）に食することのできるものには、清涼飲料しかなかった。

【0003】

【発明が解決しようとする課題】 公の場所等の人前で口臭予防や気分転換を図るには、人目に触れることなく行うことがマナーやエチケットの上からも要求され、口臭予防や気分転換の速効性を持ち、そしゃくせずに食せるものとしての清涼飲料は重量もあり、嵩張って携帯に不便であり、人目に触れずに口臭予防や気分転換を図ることができないという欠点があった。

[Objective] To melt in mouth with saliva, component to spread in mouth, to be able to taste with fragrance and refreshing feel, at same time with size which with light weight is settled in the palm, it is convenient to conveyance, halitosis prevention and mood change are assured at public site.

[Constitution] The film which consists of polysaccharide of multiple which has film-forming ability, thickening stabilizer, plasticizer and fragrance, sweetener, acid flavoring and the extract which emulsification are done is cut off in size which is settled in palm.

[Claim(s)]

[Claim] Aromatic refreshment which does film formation which consists of polysaccharide of multiple which possesses film-forming ability, component of the thickening stabilizer, plasticizer, emulsification fragrance, sweetener, acid flavoring and extract.

[Description of the Invention]

[0001]

[Field of Industrial Application] This invention, designated halitosis prevention and mood change as main objective, being convenient to portability, at same time eating at public site, it is possible etc, it is something regarding aromatic refreshment which film formation is done.

[0002]

[Prior Art] Until recently, there is a chewing gum, candy and a chilled beverage etc in foodstuff which designates halitosis prevention and mood change as objective but, with halitosis prevention and fast-acting of mood change, at same time at public site or other public, without moving mouth, (You do not digest), only chilled beverage it was in those which can eat.

[0003]

[Problems to be Solved by the Invention] To assure halitosis prevention and mood change with public site or other public, it is required even from on manner and etiquette that it does without touching to human eye, With fast-acting of halitosis prevention and mood change, without digesting, as for the chilled beverage as is eaten has also a weight, is bulk, it is inconvenient to portability, there was a deficiency that with public, it is not possible to assure the halitosis prevention and mood change.

【0004】本発明は口中で唾液により速やかに溶解又は崩壊し、成分が口中に速やかに拡がり快い芳香と清涼感とを楽しむことができ、なおかつ軽量で手の平に隠れる程度の大きさにでき持ち運びに便利であり、公の場所の人前でも人目に触れることなく、口臭予防や気分転換を図ることのできるフィルム化した芳香清涼食品を提供することを目的とする。

#### 【0005】

【課題を解決するための手段】前記目的を達成するために、本発明は膜形成能を有するカラギーナン、ペクチン、プルラン、カードラン等の多糖類を何種類かと、キサンタンガム、ローカストビーンガム等の増粘安定剤、オリゴ糖、ソルビット等の可塑剤、乳化された香料、甘味料、酸味料、エキス類を溶解して公知の膜成形技術によりフィルム化し、手の平に隠れる程度にカットしたものである。

【0006】膜形成能のあるカラギーナン、ペクチン、プルラン、カードラン等の多糖類は公知のフィルム化技術でフィルム化すると、膜厚が前記のように0.03~0.05mmと薄くなるので、芳香成分の香料およびエキス類を口臭予防や気分転換の効果をもたせるように配合するためには、固形分換算で合計5~7%添加する必要がある、また芳香成分である香料はフィルム化した芳香清涼食品の乾燥中の耐性を持たせるためにオイル化して添加する。

【0007】甘味料は一般的な砂糖とかブドウ糖では、甘味を感じる量だけ添加すると、大量に必要となり、多糖類のフィルム形成を阻害するため、甘草やアスパラテーム、ステビア等の甘味度が砂糖とかブドウ糖の300倍程度の甘味料を用いる。

【0008】酸味料はクエン酸等の一般に使用される酸でよいが、前記膜形成能を持つ多糖類はpHの低い(4.5以下)溶液中では、温度との相乗効果により、分子間の結合が加水分解を受けて膜形成能を失うため、pHが4.5以下にならないように添加量を制限する。

【0009】酸味料の添加量を増加させるためには、芳香清涼食品のフィルム乾燥中に酸味料溶液を吹き付ける方法があり、この場合はその添加量は固形物換算で5%まで可能である。

[0004] This invention, in mouth rapidly melts or collapses with saliva, component to spread rapidly in mouth, to be possible to enjoy with the pleasant fragrance and refreshing sense. Furthermore it can make size of extent which with the light weight hides in palm, it is convenient to conveyance. It designates that, assuring halitosis prevention and mood change it is possible even with public of public site, offers film formation aromatic refreshment as objective.

#### [0005]

[Means to Solve the Problems] In order to achieve aforementioned objective, as for this invention the carageenan, pectin, pullulan and curdlan or other polysaccharide which possess film-forming ability notypes, xanthan gum, locust bean gum or other thickening stabilizer, oligosaccharide and sorbitol or other plasticizer, emulsification fragrance, sweetener, acid flavoring and extract, melting, film formation it does with film formation technology of public knowledge. It is something which is cut off in extent which hides in palm.

[0006] As for carageenan, pectin, pullulan and curdlan or other polysaccharide which have the film-forming ability when film formation is done with film formation technology of public knowledge, film thickness aforementioned way because 0.03 to 0.05 mm it becomes thin. In order fragrance of fragrance component and extract in order to possess the effect of halitosis prevention and mood change, to combine, It is necessary total 5 to 7% to add with solid fraction conversion. In addition as for fragrance which is a fragrance component, because resistance which is in midst of drying aromatic refreshment which does film formation can be given, converting to oil, it adds.

[0007] Sweetener with general sugar or fructose, when just quantity which feels sweet adds, becomes necessary for large scale. In order to obstruct film formation of polysaccharide, Glycyrrhiza and Aspartame and stevia or other sweetness use sweetener of 300 fold of sugar or fructose.

[0008] Acid flavoring may be acid which citric acid or other generally is used, but, as for polysaccharide which has aforementioned film-forming ability in (4.5 or less) solution where pH is low, with synergistic effect of temperature, connection of intermolecular receiving the hydrolysis, because it lose film-forming ability, In order for pH not to become 4.5 or less, addition quantity is restricted.

[0009] In order addition quantity of acid flavoring to increase, there is a method which blows acid flavoring solution in film drying of aromatic refreshment. In this case addition quantity with solid conversion is possible to 5%.

【0010】また、塩濃度の影響も酸と同様に膜形成能を阻害するため、その添加量は固形物換算で0.8～1.6%に制限する。

【0011】フィルムの柔軟性と保湿、放湿性を改善するために、可塑剤としてソルビット等の糖アルコールを使用し、ソルビット以外にオリゴ糖、デキストリンを単独或いは複合して使用することが効果的である。また、この可塑剤の添加量は固形物換算で1.8%で、2%を超えるとフィルムの吸湿による溶解が起こる。

【0012】膜形成をさせるためには、乾燥させることが必要で、この乾燥のためには前記溶液を支持体に塗布するが、そのためには該溶液の粘性が重要な要素となり、増粘安定剤を添加する。この増粘安定剤には食品で一般に使用されるキサンタンガム、ローカストビーンガム等の増粘安定剤はすべて使用可能で、その添加量は固形物換算で6～8%である。

【0013】膜形成能を有する前記多糖類は、単独使用の場合には固形物換算80%で、口中でのフィルムの溶解速度を制御するために、前記のように複数の多糖類を混合して添加する。

【0014】

【作用】本発明においては膜形成能のある多糖類としてカラギーナン、ペクチン、プルラン、カードラン等を何種類かの混合物で使用し、公知の膜成形技術によりフィルム化し、その膜厚は0.03～0.05mmと薄く、手の平に収まる程度の大きさにカットするから軽量で、携帯に便利である。

【0015】また本発明の芳香清涼食品はフィルム化され前記寸法にカットされていることおよび多糖類から成るため、人前で口に入れても人目に触れることなく、またそしゃくせずとも唾液により容易に溶解する。

【0016】さらにフィルム化された芳香清涼食品には乳化された香料、甘味料、酸味料、エキス類が成分として混合されているから、唾液により溶解してその成分が速やかに口中に拡がり、芳香および清涼感を味わうことができ、速やかに口臭予防や気分転換を図ることができる。

【0017】また、水溶性にすぐれたプルランに難溶解性のカラギーナン、カードランを任意の配合率で添加すると、口中での溶解速度を任意に制御することができる。

[0010] In addition, because also influence of salt concentration obstructs film-forming ability in same way as acid, addition quantity with solid conversion restricts in 0.8 to 1.6 %.

[0011] Sorbitol or other sugar alcohol is used for flexibility of film in order to improve the moisture retaining, moisture releasing property, as plasticizer. alone or composite doing oligosaccharide and dextrin other than the sorbitol, it is effective to use. In addition, as for addition quantity of this plasticizer when with 1.8 %, it exceeds 2 % with solid conversion, melting with absorbed moisture of the film happens.

[0012] In order to do film formation, being necessary to dry, for this drying the aforementioned solution application is done in support. For that it becomes element where viscosity of said solution is important, adds thickening stabilizer. In this thickening stabilizer, as for xanthan gum and locust bean gum or other thickening stabilizer which are used generally with foodstuff, it is all usable, as for addition quantity it is a 6 to 8 % with solid conversion.

[0013] As for aforementioned polysaccharide which possesses film-forming ability, in case of the sole use with solid conversion 80 %, In order to control dissolution rate of film in mouth, the aforementioned way it mixes polysaccharide of multiple and adds.

[0014]

[Work or Operations of the Invention] Carageenan, pectin, pullulan and curdlan etc are used with the blend of some types as polysaccharide which has film-forming ability regarding this invention, film formation it does with film formation technology of public knowledge. film thickness 0.03 to 0.05 mm to be thin, because it cuts off in size of the extent which is settled in palm with light weight, it is inconvenient to portability.

[0015] In addition aromatic refreshment of this invention, Because film formation is done, cut in aforementioned dimension, and it consists of polysaccharide, inserting in mouth with public, in addition, you do not digest, you melt easily with saliva.

[0016] Furthermore because emulsification fragrance, sweetener, acid flavoring and extract it is mixed to aromatic refreshment which film formation is done, as component, Melting with saliva, component rapidly in mouth extent, be able taste fragrance and refreshing feel, is possible to assure halitosis prevention and mood change rapidly.

[0017] In addition, when in pullulan which is superior in water solubility the carageenan of poor solubility, curdlan is added with optional blend proportion, the dissolution rate in mouth can be

【0018】

【実施例】

配合成分	量 (%)
プルラン	22.4
カラギーナン	1.0
キサントガム	0.15
ローカストビーンガム	0.15
ソルビット	0.8
水	71.85
乳化ミントオイル	2.6
ハーブエキス	0.5
アスパルテーム	0.3
クエン酸	0.25

合 計	100.00
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【0019】70℃で上記配合成分を溶解した溶液を、公知のように100～180℃に加熱した回転するドラム面に塗布し、更にドラム面に塗布した溶液の上部にも100～180℃の熱風を吹き付けることにより乾燥させ、ドラム面に押し当てた刃によりドラム面から乾燥成形されたフィルムを剥離し、支持ロールを通る間にフィルムに平行に冷気を当てて冷却し、前記乾燥のための支持体のフィルム面に乗せて支持体と共に巻き取りローラーに巻き込み、ロール状とする。

【0020】次に該ロール状のフィルムを任意の幅にスリットし、恒温恒湿庫で2～3週間保存しフィルムの水分を乾燥させ、機械適正に合うように一定の水分を保持させ平衡状態とする。

【0021】最後に任意幅にスリットした前記フィルムを手の平に収まる大きさにカットし、同様の大きさに成形した容器に充填する。

【0022】

【発明の効果】本発明の芳香清涼食品は、膜厚が0.03～0.05mmで、手の平に収まるサイズのフィルムを同サイズの容器に充填したものであるから、持ち運びに便利で公の場所の人前でもさりげなく食することができ、マナーやエチケットに反することなく口臭予防や気分転換を図ることができる。

controlled optionally.

[0018]

[Working Example(s)]

[0019] Solution which melts above-mentioned mixed in component with 70 °C, Like public knowledge it heated to 100 to 180 °C in drum surface which turns the coating to do, Furthermore drying by blowing hot air of 100 to 180 °C to also upper part of solution which coating is done in drum surface, film which it was dried formed from drum surface by blade which is pressed to drum surface it peels off, while passing by support roll, applying cold air parallel to film, it cools, places in the film surface of support for aforementioned drying and with support make the entraining and roll in windup roller.

[0020] Film of said roll slitting is done next in optional width. 2 to 3 week to retain at constant temperature constant humidity warehouse, drying water of the film. In order to be agreeable to machine proper, keeping fixed water, it makes equilibrium state.

[0021] Lastly in optional width it cuts off aforementioned film which slitting is done in size which is settled in palm, it is filled in container which formed in similar size.

[0022]

[Effects of the Invention] As for aromatic refreshment of this invention, film thickness being 0.03 to 0.05 mm, because film of size which is settled in palm it is something which is filled in container of same size, Being convenient to conveyance, it can eat, even with public of the public site, It is possible to assure halitosis prevention and mood change, without opposing to the manner and etiquette.